

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2004/000164

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: H01Q 3/44, H01Q 15/14, H01P 1/18

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: H01P, H01Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION vol.51, No. 10, October 2003, page 2691-2703, Fan Yang et al, "Reflection Phase characterizations of the EBG Ground Plane for Low Profile Wire Antenna Application"; page 2698, chapter III  --	1-31
A	Microwave and Optical Technology Letters Vol. 39, No. 2, October 20 2003, page 81 - 86 D. Kuylenstierna et al "TUNABLE ELECTROMAGNETIC BANDGAP PERFORMANCE OF COPLANAR WAVEGUIDES PERIODICALLY LOADED BY FERROELECTRIC VARACTORS" page 82, chapter 1; page 83, chapter 2.1  --	1,31

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

23 Sept 2004

Date of mailing of the international search report

28 -09- 2004

Name and mailing address of the ISA/

Swedish Patent Office

Box 5055, S-102 42 STOCKHOLM

Facsimile No. +46 8 666 02 86

Authorized officer

Bo Gustavsson/MP

Telephone No. +46 8 782 25 00

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2004/000164

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Electronics Letters, Vol. 38, No. 21, 10 October 2002, page 1237-1238, D. Sievenpiper et al, "Beam Steering microwave reflector based on electrically tunable impedance surface" cited in the application  --	1-31
A	IEEE International Conference on Microwave and Millimeter Wave Technology Proceedings, page 528-531, Fan Yang et al, "Applications of Electromagnetic Band-Gap (EBG) Structures in Microwave Antenna Designs"  --	1-31
A	US 6329959 B1 (VIJAY K. VARADAN ET AL), 11 December 2001 (11.12.2001), cited in the application  -- -----	1

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

03/09/2004

International application No.

PCT/SE 2004/000164

US 6329959 B1 11/12/2001

AU 5618600 A

09/01/2001

US 6333719 B

25/12/2001

WO 0079648 A

28/12/2000